

## .3 DAY 4 WORKSHEET - Slope Intercept Form (5B)

## What Happened When Two Fruit Companies Merged?

For each exercise below, find the equation of the line passing through the given points. Circle the two letters next to the correct equation. Then write these letters in the two boxes at the bottom of the page that contain the number of that exercise.

Answers:

① (1, 5) (2, 7)

$$\textcircled{\text{IS}} y = \frac{2}{3}x + 3 \quad \textcolor{red}{3} \textcircled{\text{TH}} y = \frac{1}{2}x - 4$$

② (0, 1) (3, -8)

$$\textcolor{red}{4} \textcircled{\text{AP}} y = -\frac{3}{2}x + 8 \quad \textcircled{\text{UI}} y = -3x + 5$$

③ (2, -3) (4, -2)

$$\textcircled{\text{ST}} y = \frac{1}{2}x - 7 \quad \textcolor{red}{1} \textcircled{\text{DE}} y = 2x + 3$$

④ (2, 5) (4, 2)

$$\textcolor{red}{2} \textcircled{\text{CT}} y = -3x + 1 \quad \textcolor{red}{5} \textcircled{\text{EY}} y = 4x + 7$$

⑤ (-3, -5) (-1, 3)

$$\textcircled{\text{LO}} y = -\frac{3}{2}x - 4 \quad \textcircled{\text{IL}} y = 2x + 1$$

Answers:

⑥ (3, -1) (-6, -4)

$$\textcircled{\text{HA}} y = \frac{1}{2}x - 1 \quad \textcolor{red}{7} \textcircled{\text{ER}} y = -\frac{3}{4}x + 4$$

⑦ (4, 1) (-4, 7)

$$\textcircled{\text{IS}} y = \frac{1}{3}x + \frac{8}{3} \quad \textcircled{\text{EL}} y = -2x - 1$$

⑧ (-1, 2) (3, 4)

$$\textcolor{red}{10} \textcircled{\text{PE}} y = -x + 2 \quad \textcircled{\text{EA}} y = -\frac{3}{4}x + 2$$

⑨ (-1, -4) (2, 0)

$$\textcircled{\text{SO}} y = \frac{4}{3}x - 2 \quad \textcolor{red}{6} \textcircled{\text{AR}} y = \frac{1}{3}x - 2$$

⑩ (3, -1) (-3, 5)

$$\textcolor{red}{8} \textcircled{\text{MA}} y = \frac{1}{2}x + \frac{5}{2} \quad \textcolor{red}{9} \textcircled{\text{FE}} y = \frac{4}{3}x - \frac{8}{3}$$

3	3	5	5	8	8	1	1	4	4	7	7	9	9	2	2	10	10	6	6
<b>T</b>	<b>H</b>	<b>E</b>	<b>Y</b>	<b>M</b>	<b>A</b>	<b>D</b>	<b>E</b>	<b>A</b>	<b>P</b>	<b>E</b>	<b>R</b>	<b>F</b>	<b>E</b>	<b>C</b>	<b>T</b>	<b>P</b>	<b>E</b>	<b>A</b>	<b>R</b>

1.)  $(1, 5) (2, 7)$   
 $m = 2$   
 $\frac{y_2 - y_1}{x_2 - x_1} = \frac{7 - 5}{2 - 1} = \frac{2}{1} = 2$

2.)  $(0, 1) (3, -8)$

$m = -3$   
 $\frac{y_2 - y_1}{x_2 - x_1} = \frac{-8 - 1}{3 - 0} = \frac{-9}{3} = -3$

$y = mx + b$

$7 = 2(2) + b$

$7 = 4 + b$

$-4 = b$

$y = 2x + 3$

$y = mx + b$

$1 = -3(0) + b$

$1 = 0 + b$

$1 = b$

$y = -3x + 1$

3.)  $(2, -3) (4, -2)$   
 $m = \frac{1}{2}$   
 $\frac{y_2 - y_1}{x_2 - x_1} = \frac{-2 - (-3)}{4 - 2} = \frac{-1}{2} = -\frac{1}{2}$

$y = mx + b$

$-2 = \frac{1}{2}(4) + b$

$-2 = 2 + b$

$-\frac{2}{2} = \frac{2}{2} + b$

$-4 = b$

$y = \frac{1}{2}x - 4$

4.)  $(2, 5) (4, 2)$   
 $m = -\frac{3}{2}$   
 $\frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 5}{4 - 2} = \frac{-3}{2}$

$y = mx + b$

$5 = -\frac{3}{2}(2) + b$

$5 = -3 + b$

$8 = b$

$y = -\frac{3}{2}x + 8$

5.)  $(-3, -5) (-1, 3)$   
 $m = 4$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{3 - (-5)}{-1 - (-3)} = \frac{8}{-2} = -4$

$y = mx + b$

$3 = 4(-1) + b$

$3 = -4 + b$

$7 = b$

$y = 4x + 7$

6.)  $(3, -1) (-6, -4)$   
 $m = \frac{1}{3}$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{-4 - (-1)}{-6 - 3} = \frac{-3}{-9} = \frac{1}{3}$

$y = mx + b$

$-1 = \frac{1}{3}(3) + b$

$-1 = 1 + b$

$-2 = b$

$y = \frac{1}{3}x - 2$

7.)  $(4, 1) (-4, 7)$   
 $-(-4, 7)$

$m = -\frac{3}{4}$

$\frac{(1-7)}{(4--4)} = \frac{-6}{8} = -\frac{3}{4}$

$y = mx + b$

$7 = -\frac{3}{4}(-4) + b$

$y = -\frac{3}{4}x + 4$

$7 = \sqrt{3} + b$   
 $\frac{-3 - \sqrt{3}}{4} = b$

8.)  $(-1, 2) (3, 4)$

$m = \frac{1}{2}$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 2}{3 - -1} = \frac{2}{4} = \frac{1}{2}$

$y = mx + b$

$2 = \frac{1}{2}(-1) + b$

$2 = \frac{1}{2} + b$

$\frac{+\frac{1}{2}}{+\frac{3}{2}} = b$

$y = \frac{1}{2}x + \frac{5}{2}$

$\frac{2\frac{1}{2}}{2\frac{3}{2}} = b$   
 $\frac{5}{2} = b$

10.)  $(3, -1) (-3, 5)$

$m = -1$

$\frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - -1}{-3 - 3} = \frac{6}{-6} = -1$

$y = mx + b$

$-1 = -1(3) + b$

$-1 = -3 + b$

$\frac{+3}{+3} = b$

$2 = b$

$y = -1x + 2$

$y = -x + 2$

9.)  $(-1, -4) (2, 0)$   
 $-(2, 0)$

$m = \frac{4}{3}$

$\frac{(-4 - 0)}{(-1 - 2)} = \frac{-4}{-3} = \frac{4}{3}$

$y = mx + b$

$0 = \frac{4}{3}(2) + b$

$0 = \frac{8}{3} + b$

$y = \frac{4}{3}x - \frac{8}{3}$

$\frac{-\frac{8}{3}}{-\frac{8}{3}} = b$